

**To:** AccardiDey, AmyMarie[aaccardidey@louisberger.com]; Naranjo, Eugenia[Naranjo.Eugenia@epa.gov]  
**Cc:** Clifford Firstenberg[cfirstenberg@tierrasolutionsinc.com]; Warner, Len[lwarner@louisberger.com]  
**From:** Carlie Thompson  
**Sent:** Thur 3/23/2017 1:00:18 PM  
**Subject:** RE: NBSA Phase III Sample Re-analysis - Sample Size

Thanks AmyMarie. They will report on a dry weight basis accounting for moisture. Did USEPA's lab start with 1.0 or 1.2 grams (for this example)? Do you have a recommendation or preference? Also we were planning on re-analyzing all samples, not just those with retention time shifts.

**From:** AccardiDey, AmyMarie [mailto:aaccardidey@louisberger.com]  
**Sent:** Thursday, March 23, 2017 8:58 AM  
**To:** Carlie Thompson <cthompson@tierrasolutionsinc.com>; Naranjo, Eugenia <Naranjo.Eugenia@epa.gov>  
**Cc:** Clifford Firstenberg <cfirstenberg@tierrasolutionsinc.com>; Warner, Len <lwarner@louisberger.com>  
**Subject:** RE: NBSA Phase III Sample Re-analysis - Sample Size

Carlie – At the end, the units will be adjusted and reported on a dry weight basis, so you can start with 1.0 or 1.2 grams. Please ensure that lab accounts for moisture and reports on a dry weight basis.

AM

AmyMarie Accardi-Dey, Ph.D.

Phone: 914.620.5110

**From:** Carlie Thompson [mailto:cthompson@tierrasolutionsinc.com]  
**Sent:** Thursday, March 23, 2017 8:54 AM  
**To:** Naranjo, Eugenia  
**Cc:** Clifford Firstenberg; AccardiDey, AmyMarie; Warner, Len  
**Subject:** RE: NBSA Phase III Sample Re-analysis - Sample Size

Eugenia,

We had a question regarding the sample size; I copied AmyMarie and Len since you're out this week and they may be able to provide the answer. For the re-analysis, the lab was planning on taking a 1 gram aliquot instead of a moisture-adjusted 1 gram aliquot (e.g., 1.2 grams of sediment for a sample with 20% moisture). Please confirm this is correct.

Thanks,

Carlie

**From:** Naranjo, Eugenia [<mailto:Naranjo.Eugenia@epa.gov>]  
**Sent:** Tuesday, March 21, 2017 7:59 PM  
**To:** Clifford Firstenberg <[cfirstenberg@tierrasolutionsinc.com](mailto:cfirstenberg@tierrasolutionsinc.com)>; Carlie Thompson <[cthompson@tierrasolutionsinc.com](mailto:cthompson@tierrasolutionsinc.com)>  
**Cc:** [Juan\\_Somoano@oxy.com](mailto:Juan_Somoano@oxy.com)  
**Subject:** NBSA Phase III Sample Re-analysis

Cliff,

There are two issues stemming from your February 3 email regarding data quality / data usability for PCB Congeners (Method 1613) from the Phase III surface sediment samples:

Issue No. 1: Tierra's SQT QAPP Worksheet No. 36 states that PCB validation will follow a Tierra in-house validation SOP ("EDS SOP: Congener PCB, Rev. 3, 7/10" developed by Diane Waldschmidt of Environmental Data Services). Tierra is requesting a QAPP Amendment to change the validation procedure to instead follow the USEPA Region II SOP for PCB congeners (SOP HW-46, Revision 1, dated September 2008 "Standard Operating Procedures for EPA Method 1668"), because the Tierra validation SOP has an unnecessarily tight acceptance criterion for the PCB retention time, which will cause data rejection. Since there is no technical basis for this tighter acceptance criterion, we agree that Tierra should submit a QAPP Amendment and validate the Phase III data according to USEPA validation SOP HW-46.

Issue No. 2: Tierra's subcontract laboratory analyzed a large sample mass (10 grams) and opted not to implement GPC cleanup (per Method 1668 Section 12.7) for the Phase III sediment sample PCB analyses. Because of this decision, the Phase III sediment sample analytical results were impacted by matrix interference and a retention time shift. Tierra acknowledged during the conference call on 15 March 2017 that these two issues are resolved if the laboratory analyzes a 1 gram samples and implements the extract cleanup per the method. Tierra presented two options for response: (1) Use the data from the 10 gram samples and re-validate using the EPA validation guidance or (2) reanalyze the Phase III samples with GPC cleanup and a smaller sample mass and then validate using EPA validation guidance. The USEPA has decided that Tierra should reanalyze the Phase III sediment samples to resolve known quality issues (using 1 gram sample size with extract cleanup) to yield the highest quality PCB Congener dataset, given the amount of resources put into the planning and execution of Phase III sediment collection.

Thanks,

Eugenia Naranjo

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